

-138-

ENHANCED TRIPLE-HELIX AND DOUBLE-HELIX FORMATION  
WITH OLIGOMERS CONTAINING MODIFIED PYRIMIDINES

Abstract of the Disclosure

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Novel oligomers are disclosed which have enhanced ability with respect to forming duplexes or triplexes compared with oligomers containing only conventional bases. The oligomers contain the bases 5-  
10 (1-propynyl)uracil, 5-(1-propynyl)cytosine or related analogs. The oligomers of the invention are capable of (i) forming triplexes with various target sequences such as virus or oncogene sequences by coupling into the major groove of a target DNA duplex at physiological pH or (ii)  
15 forming duplexes by binding to single-stranded DNA or to RNA encoded by target genes. The oligomers of the invention can be incorporated into pharmaceutically acceptable carriers and can be constructed to have any desired sequence, provided the sequence normally includes  
20 one or more bases that is replaced with the analogs of the invention. Compositions of the invention can be used as pharmaceutical agents to treat various diseases such as those caused by viruses and can be used for diagnostic purposes in order to detect viruses or disease  
25 conditions.

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